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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,079	12/04/2006	Kenneth Hillel Peter Harris	P68780US1	2611
136 7590 12/09/2009 JACOBSON HOLMAN PLLC 400 SEVENTH STREET N.W. SUITE 600 WASHINGTON, DC 20004				
EXAMINER BARCENA, CARLOS				
ART UNIT 1793		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/569,079

Applicant(s)HARRIS, KENNETH HILLEL
PETER**Examiner**

Carlos Barcena

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. The amendment filed 10/27/2009 has been entered. Claims 1, 3, and 9 remain pending. Claims 2, 4-8, and 10-15 have been canceled.
2. The previous 35 USC 112 rejections of claims 2, 4-8, and 10 are moot directed to canceled claims.
3. The previous 35 USC 112 rejection of claim 3 is withdrawn in light of Applicant's amendment to claim 3.
4. The previous 35 USC 102(b) rejection of claims 1-3 and 5-15 as being anticipated by Tomic (4,174,227) is withdrawn. Tomic does not teach a silica or alumina sol having a pH of between 9.5-11.
5. The previous 35 USC 102(b) rejection of claim 3 as being anticipated by Yates (3,650,783) is withdrawn. Yates does not teach wherein the compounds comprise ferrous chromite, ferrosoferric and ferric oxide, olivine (mixed magnesium and iron silicates), norite, ferruginous zircon, ferruginous alumina and ferruginous mullite (aluminum silicate). However, the previous 35 USC 102(b) rejection of claims 1, 2, and 4-9 as being anticipated by Yates (3,650,783) is maintained and reiterated below.

Information Disclosure Statement

6. The information disclosure statement filed 10/27/2009 has not been considered due to a typographical error. The IDS incorrectly cites US Patent 4,665,276 to Bird *et al.* The correct patent number is 4,655,276. Correctly cited patent is included on PTO-892.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support for “a silica or alumina sol with a pH of between 9.5-11” (line 4 of instant claim) and “water soluble salt” (line 6) is not supported by the specification.

9. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support for “ferrosoferric and ferric oxide”, “ferruginous zircon”, and “ferruginous alumina” is not supported by the specification.

10. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support for “EDTA” and “potassium or sodium sulphite” is not supported by the specification.

Claim Rejections - 35 USC § 102

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 1, 3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Yates (3,650,783) and evidentiary reference Sigma Aldrich.

Regarding claims 1 and 9, Yates discloses trivalent metal phosphate coated colloidal silica molding powders comprising:

- a colloidal silica sol (e.g. Ludox[®] HS 30) (col. 1, line 49);
- trivalent metal selected from B, Al, Fe, and Cr (col. 1, lines 24-26); and
- at least 0.01 wt.% of a water soluble salt (e.g. sodium and potassium phosphate) (col. 2, lines 42-46).

Evidentiary reference Sigma Aldrich discloses the pH of Ludox[®] HS 30 is between 9.5 and 10.2.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yates (3,650,783) in view of Bird *et al.* (4,655,276).

Regarding claims 3, Yates teaches trivalent cations (*e.g.* B, Al, Fe, and Cr) (col. 1, lines 24-26).

Yates does not teach where in the Fe, Al, and Zr comprise ferrous chromite, ferrosiferrous and ferric oxide, olivine (mixed magnesium and iron silicates), norite, ferruginous zircon, ferruginous alumina and ferruginous mullite (aluminum silicate).

Bird, also drawn to casting/molding materials, teaches ferrosiferrous oxide (Fe_3O_4) (col. 3, line 33).

It would have been obvious to one of ordinary skill in the art at the time of invention to use ferrosiferrous oxide motivated by the fact that these certain metal oxides such as ferrosiferrous oxide are microwave susceptible used to heat the mold surface while avoiding generalized heating (abstract).

Response to Arguments

16. Applicant argues Yates does not disclose features of the present invention as claimed. Examiner respectfully submits Yates discloses the elements of the present invention.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Barcena whose telephone number is (571) 270-5780. The examiner can normally be reached on Monday through Thursday 8AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carlos Barcena/
Examiner, Art Unit 1793

/Jessica L. Ward/
Supervisory Patent Examiner, Art Unit
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